

# Devils Postpile

NATIONAL MONUMENT • CALIFORNIA

## DEVIL'S POSTPILE

The Devil's Postpile is among the finest examples of columnar basalt in the world. It was formed nearly a million years ago when lava flows erupted in the valley of the Middle Fork of the San Joaquin River. Looking down the valley from side to side, due to the activity of the faults, you may find 150 columns of lava rock.

The rock is still stacked when the rainwater, carried by the drainage of cooling lava flows, has the strength of the sea. Each year the water breaks down a column a critical length and lengthen it with rain. After critical length is reached, the column will fall over the entire length of the column and the best conditions in the flow allowed the flow to be broken, resulting in the formation of the lava columns.



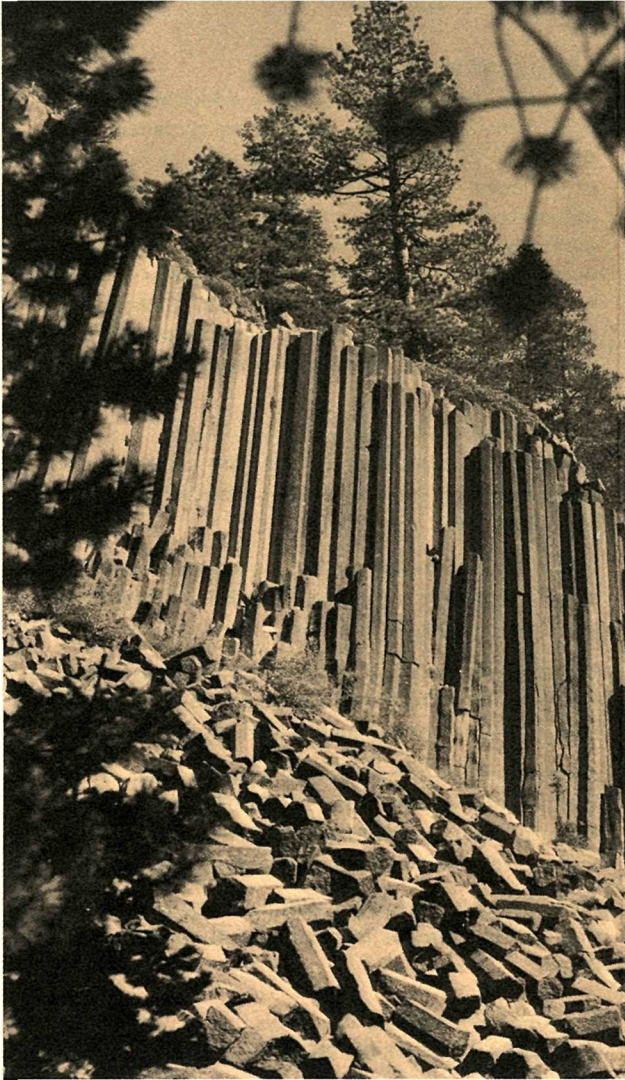
## DEVILS POSTPILE NATIONAL MONUMENT

Along the picturesque Middle Fork of the San Joaquin River at 2,300 meters (7,600 feet) on the western slope of the Sierra Nevada lies Devils Postpile National Monument. The 324-hectare (800-acre) monument near the California resort community of Mammoth Lakes includes one dominant feature: a formation of columnar basalt known as Devils Postpile. Another important feature in the area is Rainbow Falls. Pumice is the dominant rock-type encountered in the monument, but basalt, granite, and andesite lie just under the surface and crop out in many places. Plants and animals are typical of Sierra Nevada lodgepole pine-red fir forests.

### DEVILS POSTPILE

The Devils Postpile is among the finest examples of columnar basalt in the world. It was formed nearly a million years ago when basalt lava erupted in the valley of the Middle Fork of the San Joaquin River. Lava filled the valley from side to side, and in the vicinity of the Postpile was more than 122 meters (400 feet) deep.

Surface cracks started when the tension caused by the shrinkage of cooling was greater than the strength of the lava. Each surface crack branched when it obtained a critical length and together with other similar cracks formed an irregular polygonal pattern over the entire surface of the cooling lava. Ideal conditions in this flow allowed surface cracks to deepen, resulting in the formation of the long columns.



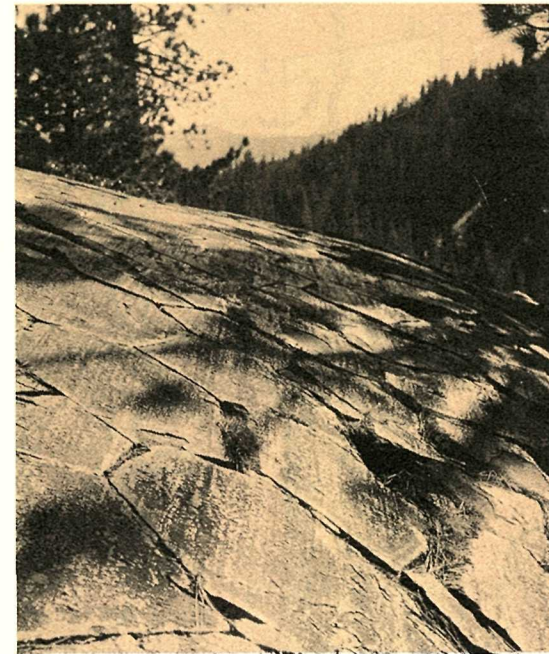
Nearly 40,000 years ago, glaciers flowed down the Middle Fork of the San Joaquin River. This moving ice easily overrode the fractured mass of lava and quarried away one side of the Postpile exposing a sheer wall of columns 18 meters (60 feet) high. Many fallen columns now lie fragmented on the talus slope below.

A hike to the top of the Postpile reveals not only a cross section of the posts, but the most interesting effect of the ice—polished tops of the basalt columns. Here, the polygonal column-ends are exposed like a tiled floor and exhibit parallel striations where the glacier dragged rocks across them.

Although Devils Postpile is unusual, it is not unique. Giant's Causeway in Ireland and Fingal's Cave in Scotland are perhaps the best known similar formations in other parts of the world.

### SODA SPRINGS

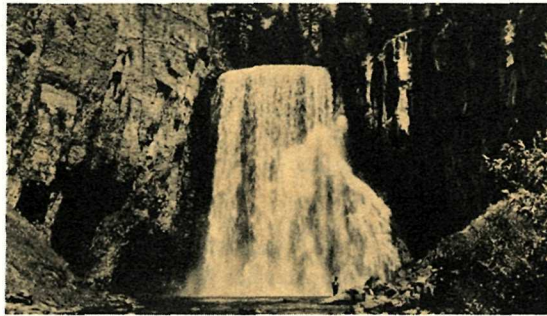
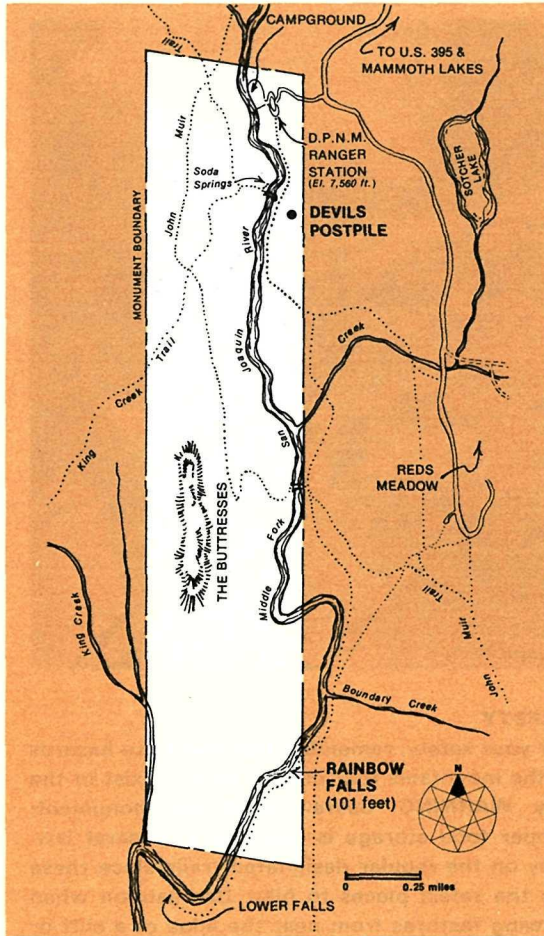
Mineral springs in the area are evidence of recent local volcanic activity. The Soda Springs are located on a gravel bar in the San Joaquin River just north of the Postpile. Here gasses are driven upward from hot areas deep in the earth and combine with ground water to produce cold and highly carbonated mineralized springs. The iron present in the water of the Soda Springs oxidizes on exposure to the atmosphere and stains river gravel a reddish brown.



### SAFETY

For your safety, remember that there are hazards in the mountains that usually do not exist in the city. **WARNING:** Bears inhabit the monument; proper food storage is required by federal law. Stay on the regular designated trails since these are the safest places to hike. Use caution when viewing features from near the edge of a cliff or gorge. Footing can be hazardous.





### RAINBOW FALLS

At Rainbow Falls the Middle Fork of the San Joaquin River drops 31 meters (101 feet) over an andesite cliff. After the last glacier melted, the river flowed downstream from the Devils Postpile in channels about 457 meters (1,500 feet) west of its present course. Flowing in these older channels, it cut through the solidified andesite lava down to granite, leaving a cliff of andesite for its eastern bank. Then, some distance upstream, the waters were diverted eastward. The river left its bed to follow its present path until it returned to its old channel by cascading down the cliff it had earlier cut, thus forming Rainbow Falls.

A short steep trail leads to the bottom of the falls where numerous flowers and grasses form an enchanting garden. Cars may be driven to within 1.6 kilometers (1 mile) of the falls via the road to Red's Meadow.

GPO: 1978-261-217/45 Revised 1978

### ABOUT YOUR VISIT

The monument is reached by a 16-kilometer (10-mile) drive to Minaret Summit on a paved road from U.S. 395, then by 11.2 kilometers (7 miles) of unpaved mountain road. The monument is administered by the National Park Service, U.S. Department of the Interior. For more information write: Superintendent, Sequoia and Kings Canyon National Parks, Three Rivers, CA 93271. Park rangers are on duty to assist you, to conduct interpretive activities, and to enforce regulations. *Closed in winter.*

**Accommodations and services.** Meals, lodging, groceries, gasoline, horses, and other facilities and services are available at Mammoth Lakes or nearby Red's Meadow.

**Camping.** A campground is maintained near the ranger station from about June 20 to October 1, depending upon the weather.

**Hiking.** Trips may be made north or south along the John Muir Trail and west on the King Creek Trail. The monument also has several short trails.

**Fishing and hunting.** Fishing is permitted in the monument, but hunting is prohibited. A California angling license with appropriate stamps is required for persons 16 years of age or over.

**Pets.** Pets are permitted in the monument only if they are kept under direct physical control at all times.

**National Park Service  
U. S. DEPARTMENT OF THE INTERIOR**

# Devils Postpile

NATIONAL MONUMENT • CALIFORNIA